

NASA TECH BRIEF



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Support for Equipment: Quick Mounting with Quick Release

A novel temporary support for equipment permits quick mounting or quick release. It consists of two components: a pin bracket for attachment to an item of equipment, and a socket bracket for mounting on any structure (Fig. 1). Alternatively the place of mounting of the two brackets may be reversed.

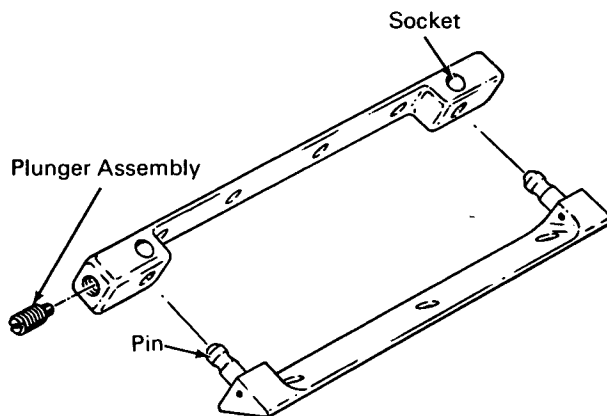


Figure 1. Socket Bracket (top) and Pin Bracket

At right angles to and at each end of the pin bracket a grooved (to accommodate a ball detent) pin is fixed; the pins are parallel and their heads are paraboloidal. In each end of the socket bar, and the female equivalent of each grooved pin, is a socket that is intercepted at right angles by a hole drilled from the end of the socket bracket. The outer end of this end hole is tapped to accept the threaded housing of a spring-loaded plunger. When the pair of pins is forced into the pair of sockets loaded with plungers, the pins are retained by the plungers with a strength that varies with the springs' resistance to compression. The equipment can be released simply by pulling.

Figure 2 shows that a square-section socket bracket can be made to accommodate four pin brackets separated by 90°; hexagonal and octagonal brackets could accommodate six and eight. Rocking of equipment is reduced by extension of the straight sections of the pins lying beyond the grooves.

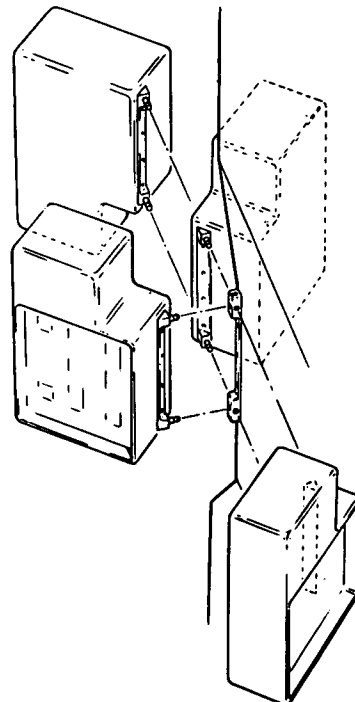


Figure 2. Socket Bar Mounting Four Containers

Although designed for temporary anchorage of equipment in spacecraft, the system could be adapted for a broad range of temporary storage media in commerce, sport, and industry: notably for jigs, store-rooms, boats, and vehicles. No engagement, release,

(continued overleaf)

or adjustment of components is required, and a man can place or release equipment while wearing the most bulky or restrictive garment.

Note:

No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Manned Spacecraft Center, Code BM7
Houston, Texas 77058
Reference: B70-10542

Patent status:

No patent action is contemplated by NASA.

Source: Winthrop W. Chamberlain II
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